

GLOSSARY

BOUNDARY ELEMENT: An element at the edge of an opening or at the perimeter of a shear wall or diaphragm.

BRACED FRAME: An essentially vertical truss, or its equivalent, of the concentric or eccentric type that is provided in a building frame or dual system to resist lateral forces.

CHEVRON BRACING: Bracing where a pair of braces, located either both above or both below a beam, terminates at a single point within the clear beam span.

CHORD: See DIAPHRAGM CHORD.

COLLECTOR: A member or element provided to transfer lateral forces from a portion of a structure to vertical elements of the lateral-force-resisting system (also called a drag strut).

CONCENTRICALLY BRACED FRAME (CBF): A braced frame in which the members are subjected primarily to axial forces.

CONTINUITY TIES: Structural members and connections that provide a load path between diaphragm chords to distribute out-of-plane wall loads.

COUPLING BEAM: A structural element connecting adjacent shear walls.

DAMPING: The internal energy absorption characteristic of a structural system that acts to attenuate induced free vibration.

DEMAND: The prescribed design forces required to be resisted by a structural element, subsystem, or system.

DIAPHRAGM: A horizontal, or nearly horizontal, system designed to transmit lateral forces to the vertical elements of the lateral-force-resisting system. The term "diaphragm" includes horizontal bracing systems.

DIAPHRAGM CHORD: The boundary element of a diaphragm or shear wall that is assumed to take axial tension or compression.

DIAPHRAGM STRUT: The element of a diaphragm parallel to the applied load that collects and transfers diaphragm shear to vertical-resisting elements or distributes loads within the diaphragm. Such members may take axial tension or compression. Also refers to drag strut, tie, collector.

DRAG STRUT: See COLLECTOR.

DRIFT: See STORY DRIFT.

DUCTILITY: The ability of a structure or element to dissipate energy inelastically when displaced beyond its elastic limit without a significant loss in load carrying capacity.

ECCENTRICALLY BRACED FRAME (EBF): A diagonal braced frame in which at least one end of each brace frames into a beam a short distance from a beam-column joint or from another diagonal brace.

FUNDAMENTAL PERIOD OF VIBRATION: The time it takes the predominant mode of a structure to move back and forth when vibrating freely.

HOLD-DOWN: A prefabricated steel element consisting of a tension rod, end brackets and bolts or lags used to transfer tension across wood connections.

HORIZONTAL BRACING SYSTEM: A horizontal truss system that serves the same function as a diaphragm.

K-BRACING: Bracing where a pair of braces located on one side of a column terminates at a single point within the clear column height.

LATERAL-FORCE-RESISTING SYSTEM: That part of the structural system assigned to resist lateral forces.

LINK BEAM: That part or segment of a beam in an eccentrically braced frame that is designed to yield in shear and/or bending so that buckling or tension failure of the diagonal brace is prevented.

MOMENT RESISTING SPACE FRAME: A structural system with an essentially complete space frame providing support for vertical loads.

REDUNDANCY: A measure of the number of alternate load paths that exist for primary structural elements and/or connections such that if one element or connection fails, the capacity of alternate elements or connections are available to satisfactorily resist the demand loads.

RE-ENTRANT CORNER: A corner on the exterior of a building that is directed inward such as the inside corner of an L-shaped building.

SHEAR WALL: A wall, bearing or nonbearing, designed to resist lateral forces acting in the plane of the wall.

SHOTCRETE: Concrete that is pneumatically placed on vertical or near vertical surfaces typically with a minimum use of forms.

SOFT STORY: A story in which the lateral stiffness is less than 70 percent of the stiffness of the story above.

SOIL-STRUCTURE RESONANCE: The coincidence of the natural period of a structure with a dominant frequency in the ground motion.

STORY DRIFT: The displacement of one level relative to the level above or below.

STRUCTURE: An assemblage of framing members designed to support gravity loads and resist lateral forces. Structures may be categorized as building structures or nonbuilding structures.

SUBSYSTEMS: One of the following three principle lateral-force-resisting systems in a building: vertical-resisting elements, diaphragms, and foundations.

SUPPLEMENTAL ELEMENT: A new member added to an existing lateral-force-resisting subsystem that shares in resisting lateral loads with existing members of that subsystem.

V-BRACING: Chevron bracing that intersects a beam from above. Inverted V-bracing is that form of chevron bracing that intersects a beam from below.

VERTICAL-RESISTING ELEMENTS: That part of the structural system located in a vertical or near vertical plane that resists lateral loads (typically a moment frame, shear wall, or braced frame).

WEAK STORY: A story in which the lateral strength is less than 80 percent of that in the story above.

X-BRACING: Bracing where a pair of diagonal braces crosses near mid-length of the bracing members.